

REMARKS FOR ADMINISTRATOR BOLDEN
50th ANNIVERSARY OF SENATE YOUTH PROGRAM

March 8, 2012

Thank you, Alexis (Brewer – SC student participant/introducer).
And thanks to all of you for letting me share some time with you during this special week. Congratulations on this high honor of being accepted as a participant in the Senate Youth Program.

When I was your age, I had set my sights on the U.S. Naval Academy, thinking I would follow in the footsteps of my uncles and my father, who had served in the Army in World War II. I had no intention of becoming a pilot nor a Marine, let alone an astronaut. But now, nearly 50 years later, I have retired as a Major General of the U.S. Marine Corps – having flown more than 100 combat missions, served as a test pilot, and flown four times to space aboard the Space Shuttle. Now I lead the nation's space agency.

I guess what my example shows is that even if you don't have everything planned out to the last detail, things may work out okay if you just keep working hard and set your sights on the next right thing. I know that may sound simple, but the difficulty is in the action, and staying the course when the going gets tough.

I'm talking to a lot of students these days trying to encourage them to go into science, technology, engineering and mathematics, because our country has a great need for new entrants in those fields. These are difficult fields, no doubt about it.

If you don't have passion, you're just not going to stick with it, or be happy if you do. But any path you choose is going to carry its own challenges and responsibilities if you're true to it and honest with yourself.

So, I'm a strong advocate for STEM education – I want to see some of you become tomorrow's astronauts, rocket scientists, and Mars geologists. After all -- I respect everyone who follows through on an education path that is right for them.

My parents were career educators, so I was truly blessed in that regard, because passions for learning and high expectations for pursuing my education were integral to my growing up. That may be why, although my current title is NASA Administrator, I also consider myself an educator as well as a lifelong learner.

As a child growing up in segregated South Carolina, my mother taught me at an early age that regardless of race, gender, background, or income, there was nothing I could not do.

She was a teacher and a librarian, but at heart she was also an explorer. So was my father, who was a high school teacher and football coach. Although both are no longer with us, they left deep legacies that I have greatly shaped my life and who I am.

Their field of exploration was not deep space, but education...their vehicles were literature, history, and reading...and their destination was the untapped potential and empowerment of young girls and boys who they believed could succeed despite the obstacles of discrimination and poverty that were so prevalent in the South Carolina at the time I was growing up.

Things have changed, but our world can still be a mighty tough place. I'm an optimist, though, and I choose to believe the better part of our natures will triumph.

We have a quote from Helen Keller on the wall at NASA Headquarters just a couple of blocks from here. It says, "No pessimist ever discovered the secret of the stars or sailed to an uncharted land or opened a new doorway for the human spirit."

I believe in a future where young people like you are going to be the first people setting foot on Mars, or leading from Earth a robotic mission to somewhere we've never been before. I believe that all the research we do in space, like the hundreds of experiments going on 24/7 right now with astronauts living and working on the International Space Station, are going to benefit life on Earth and help us make the next great leaps with humans to destinations like an asteroid and Mars.

NASA is in the future business. That means creating a brighter future and helping us to reach our higher potential as human beings.

A talented team of thousands of dedicated staff and partners across the world that I'm fortunate to lead and collaborate with are achieving some amazing things and leaving a legacy that will enable your generation to make its own discoveries and achieve milestones you didn't think were possible.

It's a very exciting time to be involved in exploration. The retirement of the space shuttle last July after 30 incredible years of flight represented a bittersweet time for NASA, but the next great era of space exploration is quickly taking shape. In fact, our most recent call for astronauts drew more than 6300 applications, the second highest we've ever had. Some from this group will become the NASA Astronaut Class of 2013. They are going to be the ones who could pioneer new ways of reaching space on commercial vehicles and possibly travel to an asteroid and lead the way for those who will go to Mars.

I was privileged to fly four times on the space shuttle and piloted the mission that deployed the Hubble Space Telescope. Being an astronaut and serving as a member of the NASA team provided me with some of the proudest moments of my life, and the shuttle provided our nation with many firsts and proud moments, not least of which was how it diversified the astronaut corps to include women and people of color.

My mentor, the late great Dr. Ron McNair, who perished in the shuttle Challenger tragedy, encouraged me to apply for the shuttle program despite my own personal doubts, and I'm forever in his debt. I hope each of you has people like that in your lives – people who want the best for you; people who may not always say what you want to hear, but who help diversify your viewpoint and consider what might be possible for your life.

It's been my observation that students who are just about to start their college careers are excited about the future. Am I right?

You should be fired up about what lies ahead – for the chance to create capabilities that we don't have today – whether that means new technologies or new ways of communicating and dealing with our world's many challenges, or new ways to affect change through the political process.

The passion to be a part of something larger and contribute to national goals has been evident in students everywhere I've traveled throughout the world -- from Purdue to MIT and Huston Tillotson; from Howard University to the University of Cairo in Egypt and Moscow University in Russia... The same passion is also evident in the elementary schools, middle schools, and high schools of every description that I've visited.

At NASA, we can tend to think of the future in terms of technologies and mission, but it's your young minds and your passion for exploration that are going to create that future – whether that means exploring another planet, or the halls of that big domed building just across the way – where I just spent all day yesterday giving testimony before committees of both the Senate and the House.

The Senate Youth Program has been helping our nation forge its path for 50 years now. When this program was created, a visionary president, President John F. Kennedy, was also putting forth a roadmap for America to reach the stars.

I was a teenager when President Kennedy delivered his charge to Congress to land a man on the moon and return him safely to Earth, but those words sparked my imagination, as they did for millions.

We recently completed the construction of the International Space Station, and it's been less than a year since we closed out the incredibly productive 30-year Space Shuttle era. But the words of President Kennedy 50 years ago are still appropriate today. He talked about the impact of the national adventure we were about to undertake in space on the minds of people everywhere. He said that in determining which road we should take, "Now it is time to take longer strides...Time for a great new American enterprise..." and a NEW ERA began.

For NASA, another new era is beginning right now. It is going to be about innovation and a big part of that at NASA is research and development – creating new capabilities that help us explore and also benefit people back here on Earth.

Did you know we sent a rover, *Curiosity*, the size of a small car to Mars last November; that it will land on the Red Planet in August of this year; and demonstrate precision landing technology that will be critical to future missions? We also launched the *Juno* spacecraft to Jupiter last August, and it will travel for five years before it reaches its destination. *Juno* is the first solar-powered spacecraft designed to operate at such a great distance from the sun.

Our *Dawn* spacecraft reached an asteroid, Vesta, last summer, the first time we've orbited one. This summer *Dawn* heads for its next destination, the dwarf planet Ceres. We're now working on the James Webb Space Telescope, which will launch in 2018 to a point one million miles from Earth, where it will observe light that is almost as old as the universe itself.

We're opening a new segment of the economy with our private industry partners who are developing human-rated systems to reach low Earth orbit (LEO). That's where the Space Station travels, about 250 miles above us.

We're also hard at work on the new heavy-lift rocket and crew vehicle that will carry astronauts to destinations in deep space. And that's just some of our near-term work!

Carrying out these myriad missions requires all sorts of diversity across NASA. Diversity is the richness that ensues from making efforts to include people on teams and in organizations from a wide variety of backgrounds. By backgrounds, I mean varying races, ethnic origins, genders, educational backgrounds – even different regions of the country. It is that diversity from which true innovation and creativity are generated. The bottom line is that I want the best people we can get at NASA.

I was lucky enough to be part of international missions on the space shuttle. From orbit, the borders between the nations of our world below don't exist, unless Mother Nature created them. We all -- as a crew, as a team -- worked together toward common goals. That is what we do at NASA. I don't care about your race, gender, sexual persuasion, or political affiliation. Those are not critical factors – they don't make a difference in your performance, and that's what counts. If you can help me put boots on Mars, that's what I'm looking for. No matter whether you become an astronaut, or a politician, or both – like the legendary John Glenn, whose legacy we celebrated just last month – if you're true to yourself and committed to a better world, what you can bring to the table, you will go far and we can use you.

When I was selected to command the first Space Shuttle mission with a Russian Cosmonaut on board, I'd been raised to think all Russians – Soviets then – were my enemy. I was trained that way in the military.

But the relationships our crew developed as we trained and carried out that mission and others served as the precursor to our extremely successful cooperation on the Russian Space Station, Mir, and ultimately on the International Space Station today. My family and I are still friends with that cosmonaut and his family two decades later. In fact, Sergei Krikalev is now the most experienced human in living and working in space – having spent more than two years in space during his four missions to Mir and the ISS – and he is now the Director of the Gagarin Cosmonaut Training Center in Star City, Russia as I serve as the NASA Administrator here in the U.S.

That new world that first started taking shape 50 years ago is now yours. Many of the projects over which I preside at NASA today would have been science fiction when I was growing up.

Our national political life has also evolved. Because of my race, no South Carolina Congressman would appoint me to the U.S. Naval Academy back in 1964, but today we have an African American President.

Some of you here tonight may walk in space near an asteroid. Others of you may be the scientists or engineers who make that possible, or may be telling me or one of my successors why your proposed satellite to travel farther into our solar system is the best choice for our next big science mission. Some of you may be the politicians who lobby for the funds to get those missions done. Perhaps one of you may be the administrator of a cultural or research institution that builds on what NASA does to inspire others to pursue their dreams as I hope I am doing for you tonight.

For me it's been a tremendous ride since I was in your shoes and for each of you there's a world of opportunity ahead.

Let me close with the story of a young African boy – Nkosi
Johnson...

***“Do all you can
With what you have
In the time that you have
In the place that you are”***

The world -- the universe -- is yours. With study, persistence, and personal commitment, it's literally in the palm of your hands.

Don't let the opportunity to make a difference in your world pass you by. Good luck and God's Peace as you open a new chapter in your lives.

Thank you.